

REMARKS

Claims 1-82, 96-97, 105-107, 109-111 are canceled. Claims 83-86, 95, 98, 102-104, 108, and 112 are amended. Claims 87-94, 99-101, and 113 were previously presented. New claims 114-123 are added. In view of these changes, claims 83-95, 98-104, 108, and 112-123 remain pending in the application.

Claim Objections

Duplicate claims have been removed by cancellation and amendment.

Rejection of Claims 83-95, 98-104, 108, and 112-113 Under 35 USC §112

Paragraph 21 and 21A on pages 6 and 7 of the Office Action reject claims 83-95, 98-104, 108, and 112-113 for (1) failing to Comply with MPEP §714.02, (2) failing to meet the Written Description Requirement, and for having (3) New Matter.

The rejection under MPEP §714.02 appears to be because “applicants should specifically point out support for any amendments made to the disclosure.” Applicant has not amended the disclosure.

The rejections based on Written Description and New Matter request the location(s) where support can be found in the specification. Many of these rejections no longer apply as a result of amendment and cancellation. For the rejections that may still be pertinent, the table below illustrates a location where each limitation is supported in the specification. The quotations mark the language that is used by the examiner in the request of support.

“controlling a potential difference between two of the electrodes”	Paragraph 0008, sentence 2 (P8, S2); P77, S1 in view of P87S3; etc.
“applying a current through a third of the electrodes”	P8, S2 and P14; etc.
“a current through a counter electrode”	P6, S2; P75, S2; P76, S1; etc.
“electrical signal is measured while potential difference is controlled”	P136, S2; etc.
“the sensor occupies an area of 160 μm^2 to 25 mm^2 ”	P144, last sentence.

Rejection of Claims 83-95, 98-104, 108, and 112-113 Under 35 USC §112, second paragraph.

Claims 83-95, 98-104, 108, and 112-113 stand rejected under 35 USC §112, second paragraph as being vague and indefinite. Each of the issues raised in this rejection are cured by amendment or cancellation.

Rejection of Claims 83-94, 98-101, 103, 108, and 112 under 35 U.S.C. §102 in View of Song

Claims 83-94, 98-101, 103, 108, and 112 stand rejected as being anticipated by U.S. Patent Number 5,567,302 (Song). “To anticipate a claim, the reference must teach every element of the claim.” See MPEP §2131.

Song teaches controlling potential relative to a reference electrode. See for instance column 7, line 4-7; column 17, lines 25 and 26. However, the reference electrode is not positioned on a substrate with a counter electrode and working electrode as evident Figure 1 and Figure 3. Because claim 83 specifies “a working electrode, a reference electrode and a counter electrode on a substrate,” Song does not anticipate Claim 83.

Song teaches that the reference electrode “can be composed of, for example, Ag/AgCl.” However, the specification of the current application specifically distinguishes between the claimed reference electrode and an Ag/AgCl reference electrode in the first sentence of paragraph [0059]; the last sentence of paragraph [0092]; etc. Because Song does not teach the claimed reference electrode, Song does not anticipate claim 83.

Song does not teach a current flowing between electrodes on a substrate. In fact, Song teaches that “(e)xperiments designed to examine ‘cross-talk’ between adjacent analysis sites have indicated no interference.” See column 6, lines 34-36. However, claim 83 specifies that “the current through the working electrode is balanced by a current through the counter electrode” where the working electrode and counter electrode are positioned on a substrate. As a result, Song does not teach each element of claim 83.

For any of the reasons cited above considered alone or considered together, Song does not anticipate Independent Claim 83.

Rejection of Claims 83-91, 93-94, 98-101, 103-104, 108, and 112 under 35 U.S.C. §102 in View of Heller

Claims 83-91, 93-94, 98-101, 103-104, 108, and 112 stand rejected as being anticipated by U.S. Patent Number 5,632,957 (Heller). “To anticipate a claim, the reference must teach every element of the claim.” See MPEP §2131.

Heller teaches an APEX device having an array of microlocations where each microlocation includes an electrode. Heller does not teach controlling potential between a working electrode and a reference electrode and measuring a current through the working electrode that is balanced by current through a counter electrode. However, claim 83 specifies, “controlling a potential difference between a reference electrode and the working electrode while measuring a current flowing through the working electrode” where “the current through the working electrode is balanced by a current through the counter electrode.” As a result, Heller does not teach each element of claim 83.

Heller does not teach controlling the potential difference so as to cause a redox reaction at the working electrode while balancing the current through the working electrode with current from the counter electrode. However, Claim 83 specifies that “the potential is controlled so as to cause a redox reaction between a component in the sample and the working electrode” and that “the current through the working electrode is balanced by a current through the counter electrode.”

For any of the reasons cited above considered alone or together, Heller does not anticipate Independent Claim 83.

Rejection of Claims 83-94, 99-101, 103, 108, and 112 under 35 U.S.C. §102 in View of Buck

Claims 83-94, 99-101, 103, 108, and 112 stand rejected as being anticipated by U.S. Patent Number 6,294,062 (Buck). “To anticipate a claim, the reference must teach every element of the claim.” See MPEP §2131.

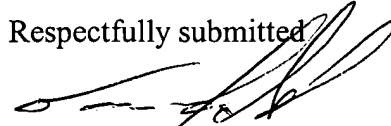
Buck teaches a Ag/AgCl reference electrode. See column 3, line 29; column 26, line 64; column 27, line 8; etc. The specification of the current application specifically distinguishes between the claimed reference electrode and an Ag/AgCl reference electrode in the first sentence of paragraph [0059]; the last sentence of paragraph [0092]; etc. Because the claimed reference

- electrode is distinguished from the reference electrode of Buck, Buck does not teach each element of Claim 83. As a result, Buck does not anticipate claim 83.

CONCLUSION

The amendments set forth above are presented for a discussion scheduled for November 30, 2004. The Examiner is encouraged to telephone the undersigned with any questions.

Respectfully submitted



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